

FIG. 1a

CAA ATC GTC ACC GAC AAT TCC ATT GGC AAC CAC GAT GGC TAT GAT TAT  
Gln Ile Val Thr Asp Asn Ser Ile Gly Asn His Asp Gly Tyr Asp Tyr  
1 5 10 15

GAA TTT TGG AAA GAT AGC GGT GGC TCT GGG ACA ATG ATT CTC AAT CAT  
Glu Phe Trp Lys Asp Ser Gly Ser Gly Thr Met Ile Leu Asn His  
20 25 30

GGC GGT ACG TTC AGT GCC CAA TGG AAC AAT GTT AAC AAC ATA TTA TTC  
Gly Gly Thr Phe Ser Ala Gln Trp Asn Asn Val Asn Asn Ile Leu Phe  
35 40 45

CGT AAA GGT AAA AAA TTC AAT GAA ACA CAA ACA CAC CAA CAA GTT GGT  
Arg Lys Gly Lys Lys Phe Asn Glu Thr Gln Thr His Gln Gln Val Gly  
50 55 60

AAC ATG TCC ATA AAC TAC GGA GCC AAC TTC CAA CCA AAT GGT AAT GCG  
Asn Met Ser Ile Asn Tyr Gly Ala Asn Phe Gln Pro Asn Gly Asn Ala  
65 70 75 80

TAT TTA TGC GTC TAT GGT TGG ACT GTT GAC CCT CTT GTC GAA TAT TAT  
Tyr Leu Cys Val Tyr Gly Trp Thr Val Asp Pro Leu Val Glu Tyr Tyr  
85 90 95

ATT GTC GAC AGT TGG GGC AAC TGG CGT CCA CCA GGA GCA ACG CCT AAG  
Ile Val Asp Ser Trp Gly Asn Trp Arg Pro Pro Gly Ala Thr Pro Lys  
100 105 110

GGG ACC ATC ACT GTT GAT GGA GGA ACA TAT GAT ATC TAC GAG ACT CTT  
Gly Thr Ile Thr Val Asp Gly Thr Tyr Asp Ile Tyr Glu Thr Leu  
115 120 125

AGA GTC AAT CAA CCC TCC ATT AAG GGG ATT GCC ACA TTT AAA CAA TAT  
Arg Val Asn Gln Pro Ser Ile Lys Gly Ile Ala Thr Phe Lys Gln Tyr  
130 135 140

TGG AGT GTT CGA AGA TCG AAA CGC ACG AGT GGC ACG ATT TCT GTC AGC  
Trp Ser Val Arg Arg Ser Lys Arg Thr Ser Gly Thr Ile Ser Val Ser  
145 150 155 160

FIG. 1b

AAC CAC TTT AGA GCG TGG GAA AAC TTA GGG ATG AAT ATG GGG AAA ATG  
Asn His Phe Arg Ala Trp Glu Asn Leu Gly Met Asn Met Gly Lys Met  
165 170 175

TAT GAA GTC GCG CTT ACT GTA GAA GGC TAT CAA AGT AGC GGA AGT GCT  
Tyr Glu Val Ala Leu Thr Val Glu Gly Tyr Gln Ser Ser Gly Ser Ala  
180 185 190

AAT GTA TAT AGC AAT ACA CTA AGA ATT AAC GGT AAC CCT CTC TCA ACT  
Asn Val Tyr Ser Asn Thr Leu Arg Ile Asn Gly Asn Pro Leu Ser Thr  
195 200 205

ATT AGT AAT GAC GAG AGC ATA ACT TTG GAT AAA AAC AAT  
Ile Ser Asn Asp Glu Ser Ile Thr Leu Asp Lys Asn Asn  
210 215 220

FIG. 2a

AAATTGAATT GTGTATATCT AATGATAACG ACAAAATCGTC ACTGTTTTA AACTAATCTC  
AAACCAATAC TTCTTTATTT AACGCTAACCC ACTTGCAATC TTATCACAAG AACATTCTT  
ATAGGAACCTT TCCCATTGCA AAGACGATAA AAAATCTTT TCCCCTATTT TATCTTATCG  
CCTTGATCGG TTTAATTGTA AAACTTTATT TTAGTTACG TGATGTTCCC TCATTCATAC  
CATTAATCAC AGTTAACGCT AGAGTCATCT TTTTCGGTT CTCAAAAATA CCTGAAGAAC  
ATTATGTCA TATTTCTCA CGCCGCTCCA TAATGGAATA TATATACTCT TTTATACATA  
TTAAGTAAAT TAGTATATAC TTGCGTTATC AAAATGTGAG ATAATCTAAT TGATCAAACA  
AGCAGCTATC CAAAAAACAC TGATGTTGAC CTCTTAAAGA AGTGTCACTA TCTATGAAAA  
GATAATTATC CAGTTCAAA ATTTGAAATA GTGTGTATGG AATAGTTGA ATGTCAACTG  
CTGTGAAAGG AGGGTAGGTA GTACCGTAGA CTTCAATTACC AAAAATTAGT TGTAAAAAAA  
TTAAAAGGAG GAATGCCTA ATG AGA CAA AAG AAA TTG ACG TTG ATT TTA GCC  
Met Arg Gln Lys Lys Leu Thr Leu Ile Leu Ala  
-25 -20

TTT TTA GTT TGT TTT GCA CTA ACC TTA CCT GCA GAA ATA ATT CAG GCA  
Phe Leu Val Cys Phe Ala Leu Thr Leu Pro Ala Glu Ile Ile Gln Ala  
-15 -10 -5

CAA ATC GTC ACC GAC AAT TCC ATT GGC AAC CAC GAT GGC TAT GAT TAT  
Gln Ile Val Thr Asp Asn Ser Ile Gly Asn His Asp Gly Tyr Asp Tyr  
1 5 10 15

GAA TTT TGG AAA GAT AGC GGT GGC TCT GGG ACA ATG ATT CTC AAT CAT  
Glu Phe Trp Lys Asp Ser Gly Ser Gly Thr Met Ile Leu Asn His  
20 25 30

GGC GGT ACG TTC AGT GCC CAA TGG AAC AAT GTT AAC AAC ATA TTA TTC  
Gly Gly Thr Phe Ser Ala Gln Trp Asn Asn Val Asn Asn Ile Leu Phe  
35 40 45

CGT AAA GGT AAA AAA TTC AAT GAA ACA CAA ACA CAC CAA CAA GTT GGT  
Arg Lys Gly Lys Lys Phe Asn Glu Thr Gln Thr His Gln Gln Val Gly  
50 55 60

AAC ATG TCC ATA AAC TAC GGA GCC AAC TTC CAA CCA AAT GGT AAT GCG  
Asn Met Ser Ile Asn Tyr Gly Ala Asn Phe Gln Pro Asn Gly Asn Ala  
65 70 75 80

FIG. 2b

TAT TTA TGC GTC TAT GGT TGG ACT GTT GAC CCT CTT GTC GAA TAT TAT  
Tyr Leu Cys Val Tyr Gly Trp Thr Val Asp Pro Leu Val Glu Tyr Tyr  
85 90 95

ATT GTC GAC AGT TGG GGC AAC TGG CGT CCA CCA GGA GCA ACG CCT AAG  
Ile Val Asp Ser Trp Gly Asn Trp Arg Pro Pro Gly Ala Thr Pro Lys  
100 105 110

GGG ACC ATC ACT GTT GAT GGA GGA ACA TAT GAT ATC TAC GAG ACT CTT  
Gly Thr Ile Thr Val Asp Gly Gly Thr Tyr Asp Ile Tyr Glu Thr Leu  
115 120 125

AGA GTC AAT CAA CCC TCC ATT AAG GGG ATT GCC ACA TTT AAA CAA TAT  
Arg Val Asn Gln Pro Ser Ile Lys Gly Ile Ala Thr Phe Lys Gln Tyr  
130 135 140

TGG AGT GTT CGA AGA TCG AAA CGC ACG AGT GGC ACG ATT TCT GTC AGC  
Trp Ser Val Arg Arg Ser Lys Arg Thr Ser Gly Thr Ile Ser Val Ser  
145 150 155 160

AAC CAC TTT AGA GCG TGG GAA AAC TTA GGG ATG AAT ATG GGG AAA ATG  
Asn His Phe Arg Ala Trp Glu Asn Leu Gly Met Asn Met Gly Lys Met  
165 170 175

TAT GAA GTC GCG CTT ACT GTA GAA GGC TAT CAA AGT AGC GGA AGT GCT  
Tyr Glu Val Ala Leu Thr Val Glu Gly Tyr Gln Ser Ser Gly Ser Ala  
180 185 190

AAT GTA TAT AGC AAT ACA CTA AGA ATT AAC GGT AAC CCT CTC TCA ACT  
Asn Val Tyr Ser Asn Thr Leu Arg Ile Asn Gly Asn Pro Leu Ser Thr  
195 200 205

ATT AGT AAT GAC GAG AGC ATA ACT TTG GAT AAA AAC AAT TAAAAATCCT  
Ile Ser Asn Asp Glu Ser Ile Thr Leu Asp Lys Asn Asn  
210 215 220

TATCTTTTC GGTCAGTTC TCATTATTTT CAAATAACCT CCCGGTTGGA TCTTTTCAA  
CGGGAGGTTT TATTGGAAAG GTTAAGTATA GTATACTCCG ATTCCATCCA GAGGAATGCT  
TGAAACACCT CCGTCACTAG

FIG. 3

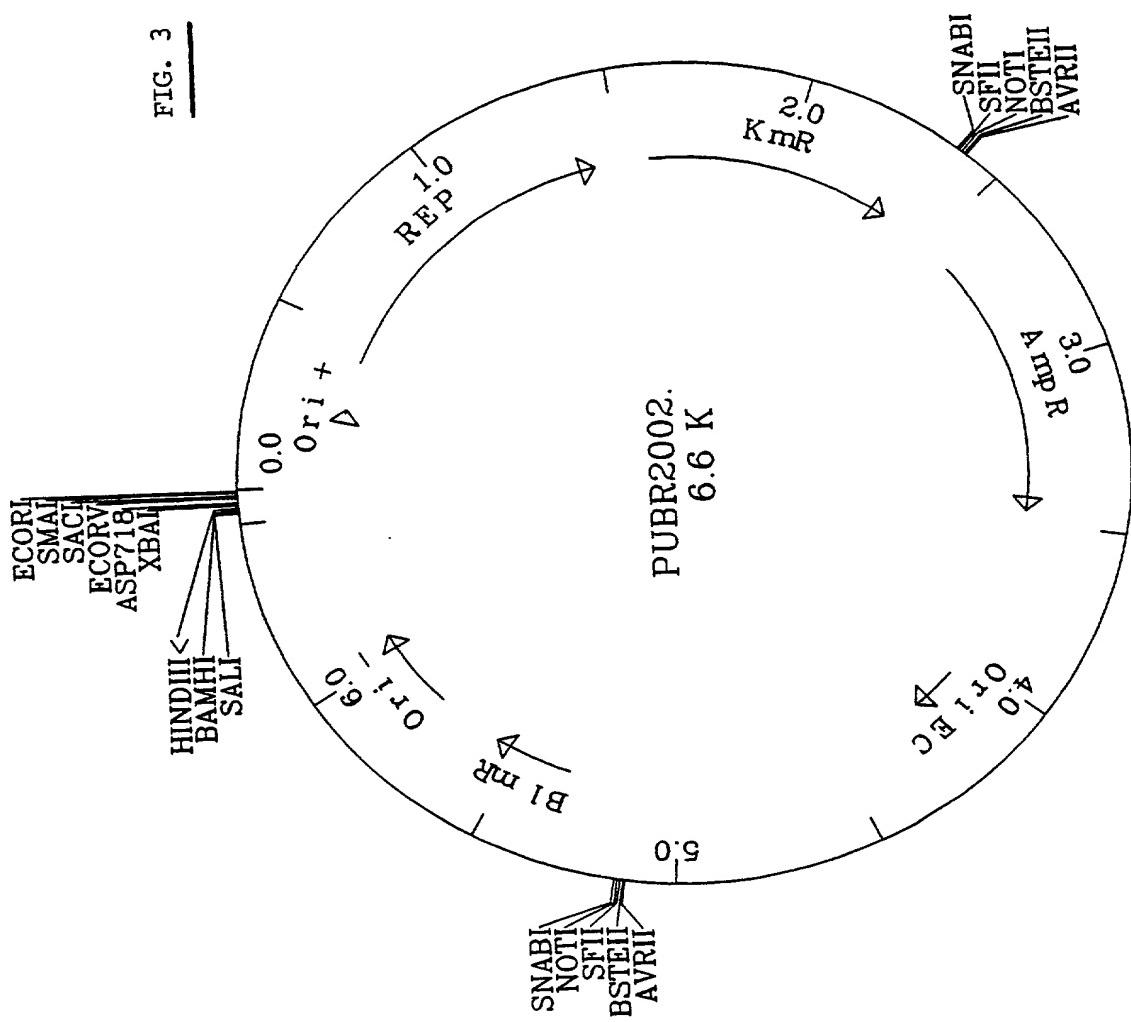
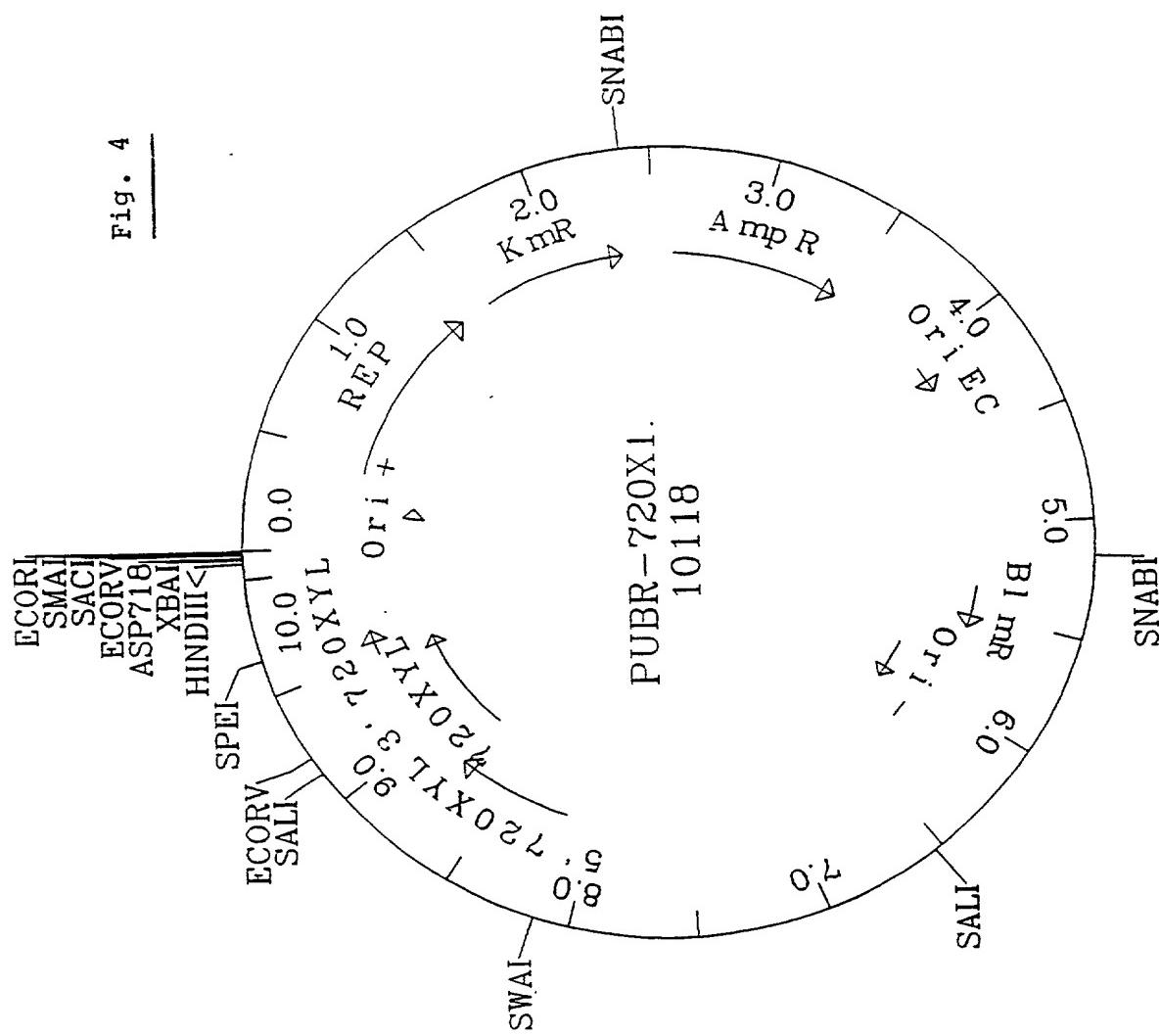


Fig. 4



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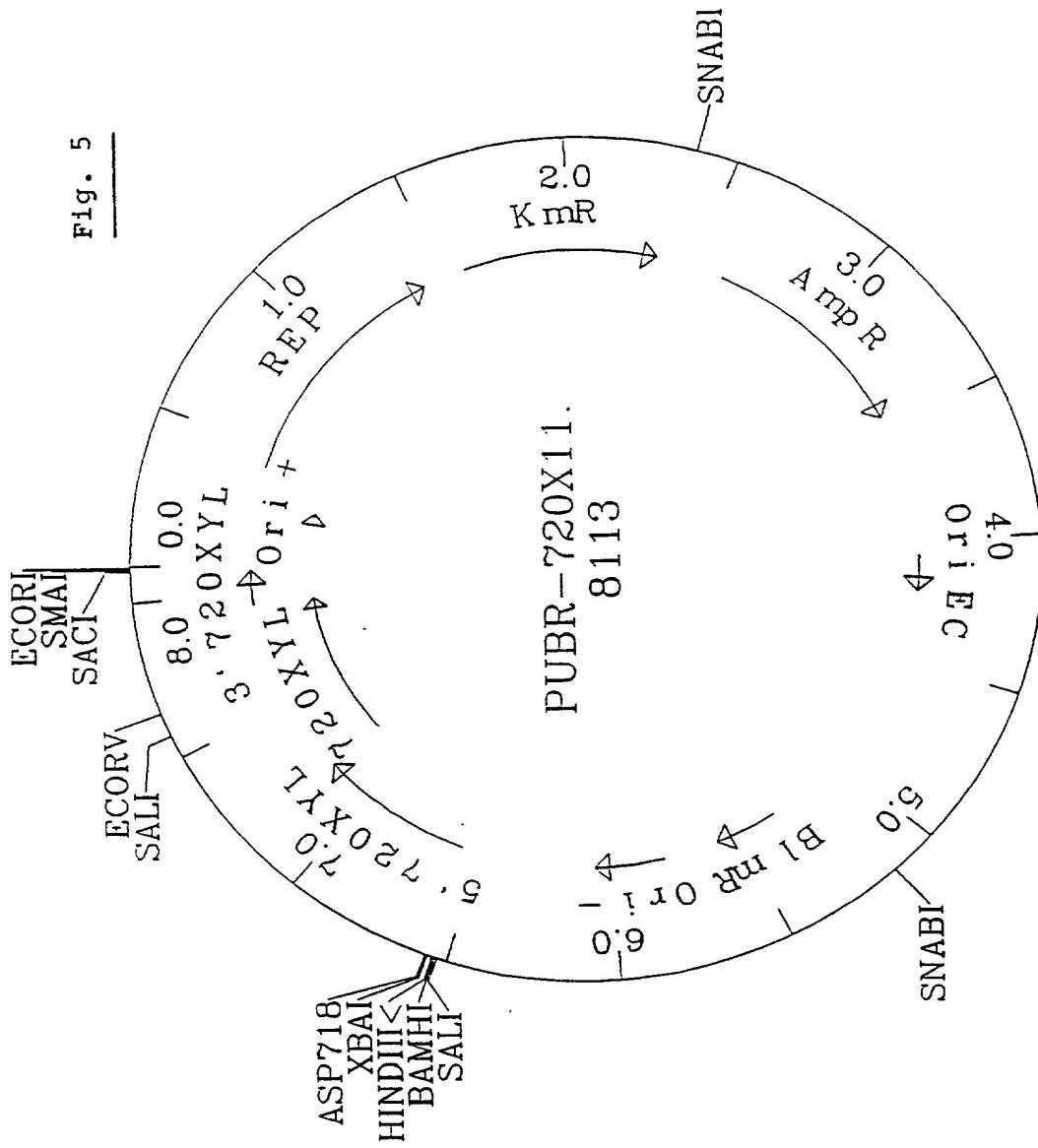


FIG. 6

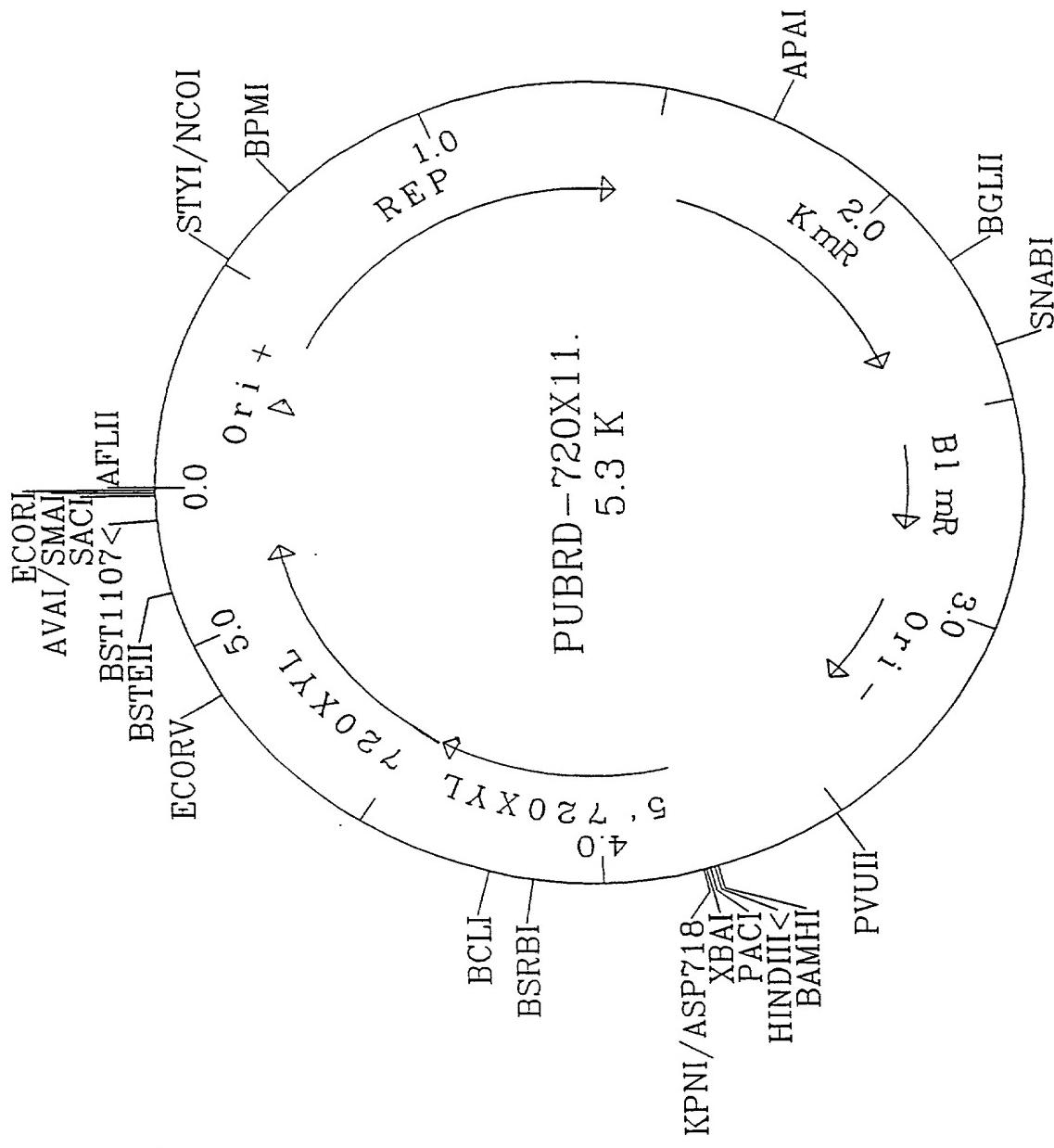
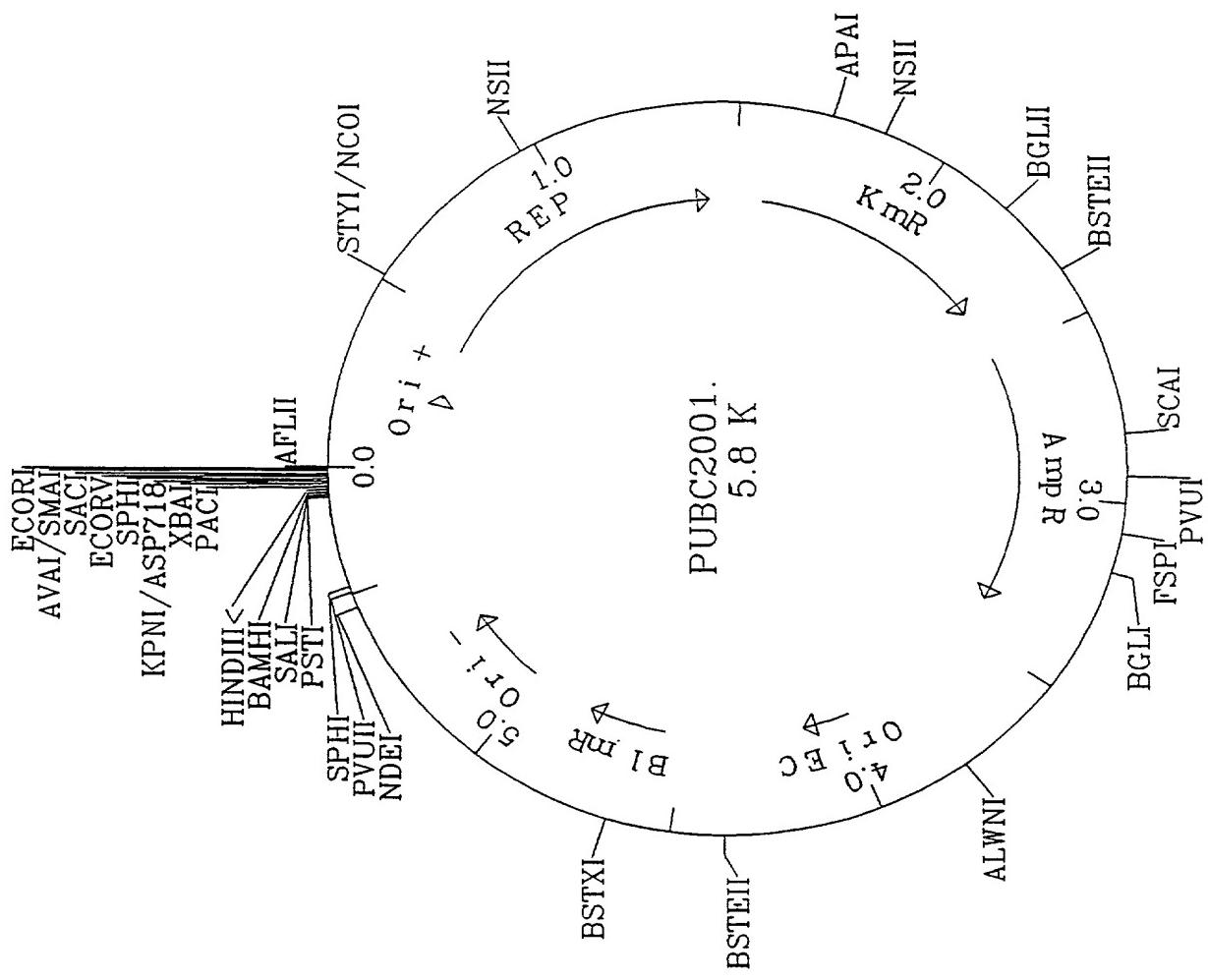


FIG. 7



**FIG. 8**

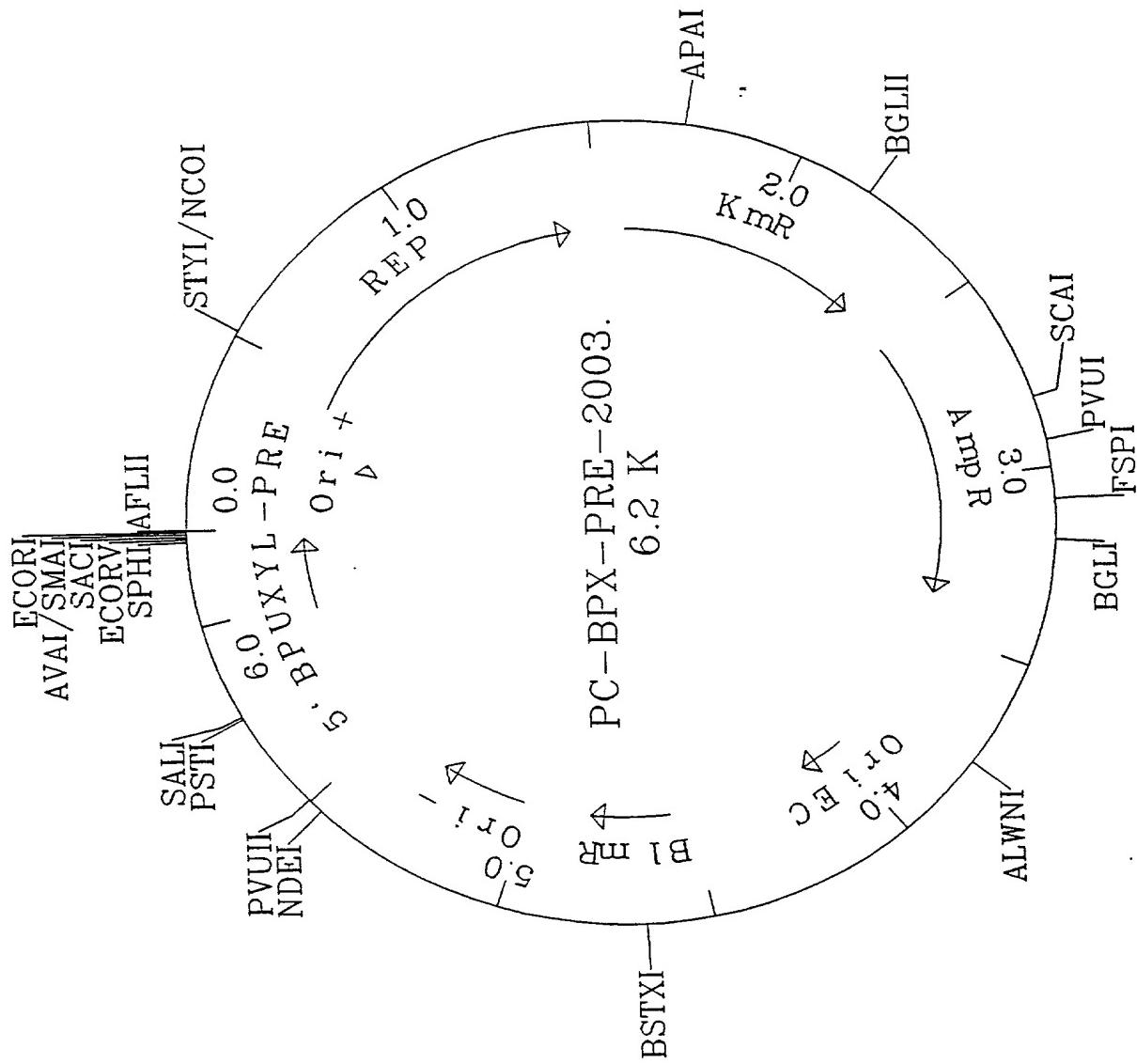


FIG. 9

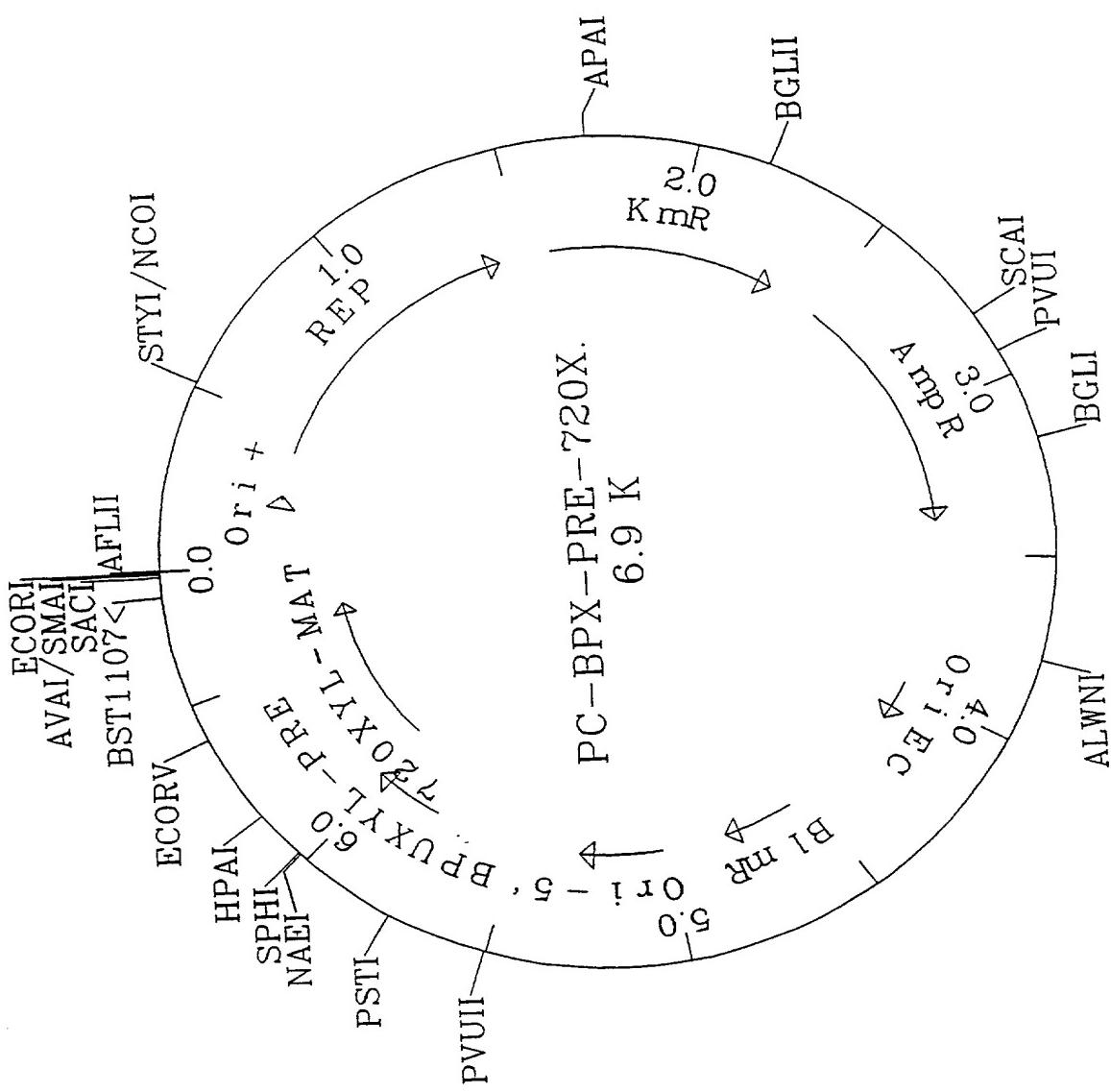


FIG. 10

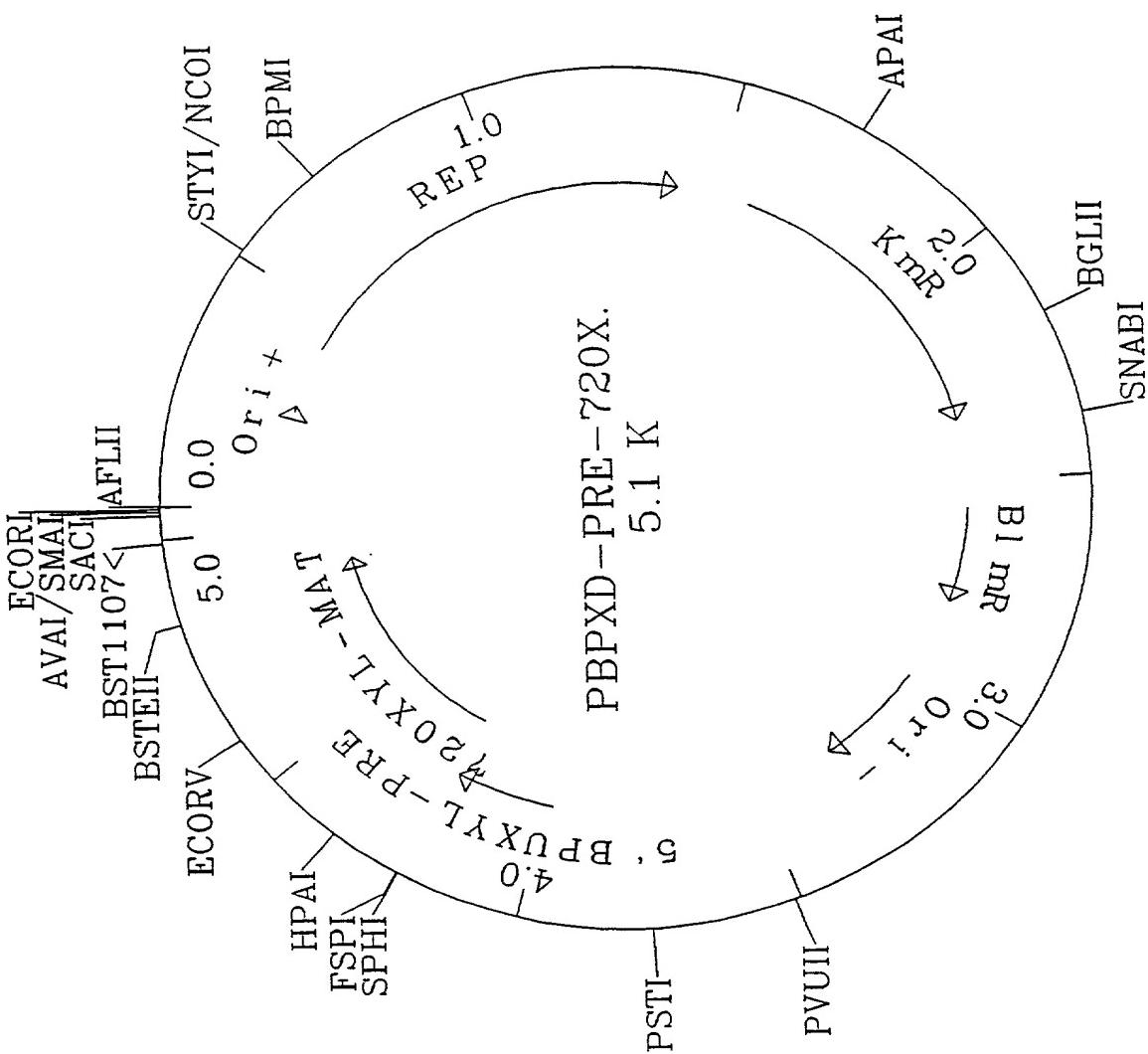


FIG. 11

TCATGTAACT CGCCTTGATC TATTCATTT GTATCAAAGG ATTTATAACAC AAACAAGAGA  
CATCCATGCC GGGTAAAGC AGTATCGTTC CATCTAACAG AGAAGGNCTG CATGAAAGGA  
GGTGATGGGT TTTTCATCTT AGGGATGACA GAACAATACG GATGAAAAAA GCAGAGGGAT  
GGAAA

**FIG. 12**

ATG AAT TTG AAA AGA TTG AGG CTG TTG TTT GTG ATG TGT ATT GGA TTT  
Met Asn Leu Lys Arg Leu Arg Leu Leu Phe Val Met Cys Ile Gly Phe  
1                   5                   10                   15

GTG CTG ACA CTG ACG GCT GTG CCG GCT CAT GCG  
Val Leu Thr Leu Thr Ala Val Pro Ala His Ala  
20                   25